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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,408	03/01/2002	Takafumi Tsuge	112121	6785

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EXAMINER

PEREZ, GUILLERMO

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 06/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,408

Applicant(s)

TSUGE, TAKAFUMI

Examiner

Guillermo Perez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 6-7, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa et al. (U. S. Pat. 5,424,600).

Referring to claim 1, Ishikawa et al. disclose an AC generator for a vehicle comprising:

a rotor (11) having a rotary shaft (4), a field winding (11b), and a slip ring (41) provided on one end of the rotary shaft (4) and electrically connected to the field winding (11b);

a brush unit (7) having a brush (72) held in sliding contact with the slip ring (41), a spring (73) for pressing the brush (72), a brush holder (71) having a portion for receiving the brush (72), and a slip ring cover (32) for covering the outer periphery of the slip ring (41); and

a suction/discharge port (8) formed in a peripheral direction of the slip ring cover (32 see figure 6).

Referring to claim 6, Ishikawa et al. disclose that each of the brush holder (71) and the slip ring cover (32) has a cover portion (5) for closing its end portion at one axial end side of the rotary shaft (4), and the brush holder (71) is mounted on the slip ring

cover (32) in the state where these cover portions are made to abut against each to other.

Referring to claim 7, Ishikawa et al. disclose that engaging portions (75) are formed on the cover portions and engaged with each other.

Referring to claim 10, Ishikawa et al. disclose that the brush holder (71) and the slip ring cover (32) have a cylindrical portion formed at a frame side end portion (3), and the cylindrical portion is fitted with a small gap (Q) in a center hole made in a frame (32) to which the brush holder (71) is fixed to pass the rotary shaft (4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2-5, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. in view of Fukasaku et al. (U. S. Pat. 4,626,720).

Ishikawa et al. substantially teaches the claimed invention except that it does not show that the slip ring cover has a first wall portion formed in a shape of an arc in cross section perpendicular to the rotary shaft. Ishikawa et al. do not disclose a second wall portion formed inside the first wall portion. Ishikawa et al. do not disclose that the suction /discharge port is formed between the first wall portion and the second wall portion.

Ishikawa et al. do not disclose that the first wall portion and the second wall portion overlap in the peripheral direction and covers the suction/discharge port.

Ishikawa et al. do not disclose that the brush holder partially extends to the first wall portion. Ishikawa et al. do not disclose that the suction/discharge port generally faces toward a ground in a state where the AC generator is mounted on a vehicle.

Fukasaku et al. disclose that the slip ring cover (70') has a first wall portion (75) formed in a shape of an arc (figure 4) in cross section perpendicular to the rotary shaft (6). Fukasaku et al. disclose a second wall portion (74) formed inside the first wall portion (75). Fukasaku et al. disclose that the suction /discharge port is formed between the first wall portion (75) and the second wall portion (74).

Fukasaku et al. disclose that the first wall portion (74) and the second wall portion (75) overlap in the peripheral direction and covers the suction/discharge port. Fukasaku et al. disclose that the brush holder (24) partially extends to the first wall portion (75). The invention of Fukasaku et al. has the purpose of preventing the dust in the cooling air from attaching to the commutator surface.

It would have been obvious at the time the invention was made to modify the generator of Ishikawa et al. and provide it with the slip ring cover, brush holder, and port configuration disclosed by Fukasaku et al. for the purpose of preventing the dust in the cooling air from attaching to the commutator surface.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to place the port facing toward ground since it has been held that a

mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

3. Claims 9 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. in view of Ishida et al. (DE 19,950,126).

Ishikawa et al. substantially teaches the claimed invention except that it does not show that at least one of a projection and a groove are formed on the side wall portion to divide the area where the slip ring cover abuts against the brush holder into a plurality of portions. Ishikawa et al. do not disclose that an extending portion is formed on at least one of end portions of the slip ring cover in an axial direction to extend in a radial direction, and is inserted into a radial groove formed on the brush holder. Ishikawa et al. do not disclose that the slip ring cover has a rib-shaped projection formed on a surface where the slip ring cover abuts against the brush holder and is made to abut against the brush holder.

Ishida et al. disclose that at least one of a projection (43) and a groove are formed on the side wall portion (53) to divide the area where the slip ring cover (33) abuts against the brush holder (26) into a plurality of portions. Ishida et al. disclose that an extending portion (50) is formed on at least one of end portions of the slip ring cover (33) in an axial direction to extend in a radial direction, and is inserted into a radial groove formed on the brush holder (26). Ishida et al. disclose that the slip ring cover (33) has a rib-shaped projection (51) formed on a surface where the slip ring cover (33) abuts against the brush holder (26) and is made to abut against the brush holder (26).

The invention of Ishida et al. has the purpose of facilitating the manufacturing of the air feeder.

It would have been obvious at the time the invention was made to modify the generator of Ishikawa et al. and provide it with the side wall, extending portion, and rib-shaped projection configuration disclosed by Ishida et al. for the purpose of facilitating the manufacturing of the air feeder.

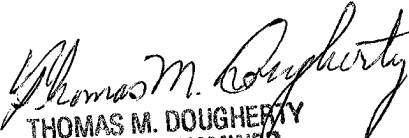
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
June 26, 2002


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